

Notice of Allowability

Application No.

10/786,066

Examiner

Sajous Wesner

Applicant(s)

HOFMAN ET AL.

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment and response dated 1/7/08.
2. ☒ The allowed claim(s) is/are 1,2,4-17 and 19-25.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Sajous Wesner
Primary Examiner
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DETAILED ACTION

Remark

This communication is responsive to the amendments and response dated January 7, 2008. Claims 1-2, 4-17, and 19-25 are presented for examination.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ester John on February 1, 2008.

The application has been amended as follows:

In claim 1 at line 5, claim 12 at line 11, in claims 15-16 at lines 5 and 6, respectively, and at line 12 of claims 24 and 25, after "main color values" and before "such", insert *_by using a distribution of the main colour values with respect to confusion lines for a protanope observer in at least a part of a colour space_*.

In claim 5 at line 2 and claim 19 at lines 1-2, replace "a distribution" with *_the distribution_*.

Allowable Subject Matters

2. Claims 1-2, 4-17, and 19-25, after further reconsideration and search, are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The best prior art of record, Hofman (US 20030058475) discloses a method of converting a digital color image to a digital gray value image and in so doing distinguishably reproducing colors present in the color image, the digital color image being built up of pixels each having a color value and the digital gray value image being built up of pixels each having a gray value. In the invention, the color values of the pixels are converted to gray values by the use of a dynamically adapted conversion function which is optimized on the basis of a comparison of color differences in the digital color image and gray value differences corresponding to the color differences in the digital gray value image (see abstract and paragraph 13). Hofman discloses converting a number of main color values to different main color values using a cluster analysis (see paragraphs 17-18, 35-40, 43, 48). However, converting a digital colour image having colour values to a digital colour image for an observer suffering from a colour-blindness comprising the steps of converting a defined number of main colour values of a digital colour image that is determined by a cluster analysis of the colours of the digital colour image to different main colour values by using a distribution of the main colour values with respect to confusion lines for a protanone observer in at least a

part of a colour space such that the converted main colour values are perceived as distinguishable from each other by said observer [when rendered].

The Hino reference (US 6473521) discloses a method of converting a digital color image to digital gray value image comprising the methods of determining the main color of the color image; converting the main colors to gray value images; calculating the distance on gray value scale of gray values corresponding to the main color values; and compiling an adapted conversion function between the gray and color distances. Hino further comprises a conversion module, a color distance module, a gray distance module and an adaptation module to calculate a localized correction function. See Summary of Invention & cols. 7-10)

Inoue et al. (US 6128407) appear to disclose the use of the main color values that is defined by a cluster analysis, as characterized by the depictions at *Figures 26, 36-38 and "Summary of Invention "*. Inoue et al. disclose the calculation of weighted distance between the target pixel and each of the clusters, and used for later conversion process (*see, columns 47 and 48*); Inoue et al. further disclose the grouping means for determining whether or not the adjacent (or local) areas can be combined based on the color distribution in response to the determination results (*See e.g. claims 3&4*).

However, the combination of Hino and Inoue fail to teach the above underlined features of the invention in the manner recited in the claims. For the aforementioned reasons, the limitations of claims 1-2, 4-17, and 19-25 are allowed over the prior art.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sajous Wesner whose telephone number is 571-272-7791. The examiner can normally be reached on M-F 9:15-6:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Sajous Wesner

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Primary Examiner
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2/1/08